

Notice of Allowability

Application No.

10/052,326

Examiner

William K Cheung

Applicant(s)

HAMED ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment.
2. ☒ The allowed claim(s) is/are 23-42.
3. ☒ The drawings filed on 6/6/2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 0118
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. In view of Preliminary Amendment filed January 18, 2002, claims 1-22 have been cancelled, and new claims 28-42 have been added. Claims 23-42 are pending.

Allowances

2. Claims 23-42 are allowed.
3. The following is an examiner's statement of reasons for allowance:

As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the closest prior art of Welborn (US 5,183,867) to render the present invention anticipated or obvious to one of ordinary skill in the art.

The invention of claims 23-25, 28-38 relates to a process for olefin polymerization comprising contacting an olefin with a catalyst composition comprising (A) a solid catalyst component comprising a transition metal containing metallocene compound, a transition metal-containing non-metallocene

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compound, a magnesium compound and a polymeric support material, and (B) a cocatalyst comprising an aluminum compound, said contacting occurring under conditions sufficient for the production of olefin polymers.

The invention of claims 26-27, 39-42 relates to a process for preparing an olefin polymerization catalyst composition comprising combining support polymer particles, a magnesium compound, a transition metal-containing metallocene compound, and a transition metal-containing non-metallocene compound, to provide a solid catalyst component, and combining the solid catalyst component with a cocatalyst compound to provide an olefin polymerization catalyst composition.

The closest prior art of Welborn discloses a process for polymerizing ethylene with C₄ or higher olefins (col. 1, line 7-15). In example 1 (col. 16, line 40-61), Welborn discloses that the process comprises (a) a solid catalyst component (col. 16, line 59) comprising a transition metal-containing metallocene compound, bis(n-butylcyclopentadienyl) zirconium dichloride (col. 16, line 54), a transition metal-containing non-metallocene compound, zirconium tetrachloride (col. 16, line 53), and a silica support (col. 16, line 44) which can also be a polyolefin based support (col. 4, line 45-46), and (b) a cocatalyst comprising an aluminum compound, methyl aluminoxane (col. 16, line 48). However, Welborn is silent on using a polymeric support for the catalyst. Therefore, the disclosure of Welborn does not teach or suggest to one of

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ordinary skill in the art to use a polymeric support for the instantly claimed polymerization process. Further, in view of "unexpected results" that applicants' claimed polymerization process comprising a novel catalyst composition which possesses improved catalyst activity (page 22, line 17 to page 23, line 4) which far exceeds the polymerization process as disclosed in Welborn (col. 20, line 2, 51). The invention of claims 23-42 is allowed.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, and to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571)

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272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung

Patent Examiner

May 7, 2004